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ABSTRACT

The document presents a syllabus which would serve as a guideline for health occupations educators in establishing a course of study for training medical assistants which would meet New York State requirements and be acceptable for State credit. The syllabus is arranged in three columns: (1) minimum acceptable content of study which requires 80 percent of the course time in instruction, (2) instructional objectives based on student performance, and (3) teaching suggestions. The course of study is divided into six sections: general orientation (2 areas), the medical assistant (4 areas), body structure and function (15 areas), administrative duties (4 areas), clinical duties (5 areas), and technical duties (3 areas). A discussion on the relationship of clinical experience, a sample clinical experience agreement, procedures for obtaining certification, a resource list of instructional materials, and source directory of suppliers are appended. (EC)

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HEALTH OCCUPATIONS EDUCATION PROGRAM

SYLLABUS in

MEDICAL ASSISTING

CE 005 927

The University of the State of New York/The State Education Department
Bureau of Occupational and Career Curriculum/Albany, New York 12234
1975

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Ruth-Ellen Ostler

FOREWORD

The ever-increasing ratio of patients to physicians has created a need for assistants educated to perform those functions of a practice which are not reserved, by law or ethics, to the licensed physician or registered physician's associate. In response, a statewide advisory committee was convened in August 1972, to set objectives and parameters for instruction in medical assisting. Sitting as the committee, were ——

Marjorie Barscz, Coordinator of Health Occupations Education, Herkimer BOCES
Ina Conley, Associate in Health Occupations Education, The State Education Department
Dominick Eanello, Assistant Dean of Physical and Health Sciences, Hudson Valley Community College
Helen Elbert, Teacher of Medical Assisting, Nassau BOCES
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Thelma Pottruck, Teacher of Medical Assisting, Suffolk BOCES #3
Donald Walker, M.D., The State Health Department
Karl S. Wittman, Associate in Health Occupations Education, The State Education Department.

Subsequent evaluation of the committee's product led to the decision to select this project as a first experiment in local agency development of State curriculum, under Department management. In January 1973, G. Earl Hay, then Supervisor of Vocational Curriculum, Karl S. Wittman, and Mr. Messier met at Nassau BOCES with Frank Wolff, Assistant Superintendent for Occupational Education, and Arthur Side, Supervisor of Occupational Instruction, to effect a grant-in-aid curriculum development agreement. During the following spring Mr. Messier and Mr. Wittman met at intervals with Neil Lash, Curriculum-Coordinator, Nassau BOCES, and Mrs. Goldman, the development team leader, to guide and evaluate the production of a first draft of content and performance objectives.

In September 1973, Mr. Messier presented desired revisions to V. Frank Blasio, Mr. Lash's successor as Curriculum Coordinator, and Edith Tobin, Program Associate for Health Occupations who would chair a writing committee. Under Mrs. Tobin's leadership, Nassau teachers of Medical Assisting, Helen Elbert, Marilyn Goldman, Barbara Kalfin, and Arlene McCullock, and practicing Medical Assistants Jeanne League and Patricia Roberts, revised the first draft and added teaching suggestions and a resource list. The completed manuscript was then evaluated by Department health occupations, health professions, and curriculum personnel before being prepared by Mr. Messier for printing as this Syllabus in Medical Assisting.

G. Earl Hay, *Chief*
Bureau of Occupational and Career Curriculum

Gordon E. Van Hooft, *Director*
Division of Curriculum Development

MESSAGE TO TEACHERS AND ADMINISTRATORS

The Health Occupations Education Syllabus in Medical Assisting is a statement of the minimum course content acceptable for State credit. A local course of study based upon this syllabus should require 2½ hours each day of 160 teaching days, in each of 2 academic years. A program of supervised work experience in the medical office should be an integral part of the second year of instruction. Where offered, a foundations or core course in Health Occupations Education may be substituted for the broad-base health occupations instruction of the Medical Assisting Program. Local courses meeting these standards of content and instructional time may grant two credits per year, for a Group II sequence of four credits, as provided in *The Secondary School Curriculum of New York State: A Handbook for Administrators.*

The paramount objective of instruction in Medical Assisting is that of all occupational education — graduate employability. Only students evidencing possession of at least minimum personal abilities necessary to successful employment should be scheduled for instruction in this program. Capable students must not, however, be deprived of academic studies required for admission to postsecondary programs leading to licensing or certification in other health occupations, should such students so aspire.

The Introduction to this syllabus contains recommendations regarding selection of teachers and students, suggests ancillary studies, and explains the use of the syllabus in developing a locally effective course of study. Every director of occupational education, supervisor of occupational instruction, coordinator of occupational curriculum, and coordinator of a Health Occupations Education program should be familiar with its contents. Every teacher of Medical Assisting should have a personal copy, and every guidance office scheduling students for programs of occupational education should have a reference copy.

The valuable contribution of the advisory committee members, and the Nassau County B.O.C.E.S. development and writing teams, in making this syllabus a reality is deeply appreciated. Their enthusiasm for the program, expertise in the field, and sincere effort in developing the contents in cooperation with Department personnel have made this a very practical document for local use.

Ruth-Ellen Ostler, *Chief*
Bureau of Health Occupations Education

Robert H. Bielefeld, *Director*
Division of Occupational Education Instruction

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INTRODUCTION

This syllabus is the product of the combined knowledge and experience of working medical assistants, and of occupational curriculum specialists and health occupations educators of both the State Education Department and several Boards of Cooperative Educational Services. Its content should, then, be of considerable assistance to established teachers as well as to novices. This introductory section is provided to aid teachers, counselors, administrators, and curriculum coordinators in effective use of the syllabus.

THE TEACHER

The teacher of a course in medical assisting should be certificated or eligible for certification as a teacher of Medical Assisting, and first of all, an experienced medical assistant. While the registered or licensed practical nurse who has worked as a medical assistant should prove eminently qualified to teach the course, employment of a nurse who lacks this job experience is not encouraged.

THE STUDENT

Preparing the student for employment as a medical assistant is the *raison d'etre* of this course. A valid secondary objective is to provide entry-level instruction to students wishing to enter postsecondary study for certification or licensing in health occupations requiring additional formal education.

Employment as a medical assistant requires possession or certain inherent physical, mental, and emotional attributes in addition to the skills and knowledge developed by instruction. To prevent the waste of funds, class space, teacher effort, and student effort —— and above all, to spare the graduated student probable disappointment —— educators must carefully evaluate the probable employability of prospective students of this course. It is no service to the student to schedule for a course in Medical Assisting one who:

Has health problems which prevent normal mobility

Has allergies which would adversely affect working with patients

Is uncontrollably overweight to the point where maneuverability in close quarters is adversely affected

Lacks manual and digital dexterity

Lacks normal vision (corrected) in either eye

Cannot hear (corrected) conversation of normal intensity, through at least one ear

Has serious speech problems

Has a history of emotional instability, or antisocial behavior

Cannot achieve a grade of "medium" or better, on the General Aptitude Tests administered by the New York State Department of Labor

It is recommended that a class group contain no more than 24 well-qualified students per teacher, and that the clinical experience program be organized on a ratio of 10:1.

CONCURRENT OR PREVIOUS STUDY

The schedule of a student who expresses the desire to enter postsecondary education in the health field, should be arranged to allow completion of any necessary course work in biology, chemistry, and mathematics. The home-school schedule of the student motivated toward employment as a medical assistant should provide Business Education courses in typewriting and recordkeeping, previous to or concurrent with Medical Assisting study. In areas where medical offices are not readily accessible through public transportation, driver education should be available to students of Medical Assisting. Remedial instruction should be provided to students entering the course, who do not possess at least tenth grade communication skills.

THE SYLLABUS

This syllabus is not intended to be used as a course of study. While organized in a logical progression, the content is not in a teaching sequence. The teacher of Medical Assisting must develop a course of study based on this syllabus, but sequenced to emphasize local needs and conditions, and reflect that teacher's own personality and selected methodology.

A 3-column format was adopted for the syllabus, for clarity and simplicity of use. Resources and a source directory were appended.

The first column of the syllabus lists the minimum acceptable content, instruction in which should require approximately 80 percent of the course time, thus allowing addition of content and increased emphases selected to meet local needs.

The second column contains instructional objectives stated in terms of desired student performance —— a recommended form which simplifies and improves both planning and evaluation. These objectives are written in

the broad, general terms appropriate to a syllabus. They must be rewritten in expanded detail when part of a teacher's course of study, to more specifically define the skills and knowledge necessary to employment.

The third column contains suggestions for teaching which should help the experienced medical assistant, who is a novice teacher, to prepare lessons, and should remind the experienced teacher of the course that certain parts of the content, which seem to go without saying, must be fully covered for benefit of the far-from-experienced students. All teachers should find this column useful, per se, and as a stimulant to each teacher's own ingenuity and resourcefulness.

The appendix lists books, periodicals, catalogs, and specific audiovisuals which are of proven value. The list is neither exclusive nor static. It is only one of many sources of information regarding instructional materials to which the teacher should be constantly attuned. Addresses of suppliers are included for the teacher's convenience, as is a sample clinical experience agreement, and the procedure for obtaining certification as a Medical Assistant from the American Association of Medical Assistants Inc.

THE COURSE OF STUDY

A local education agency which wishes to grant State credit for a course in Medical Assisting must keep on file a course of study based on this syllabus, prepared by the teacher(s) of the course, or —— where reason for departure exists —— submit copy of a nonconforming course of study to the Bureau of Occupational and Career Curriculum Development, for evaluation toward approval. The course of study —— whether nonconforming or based on this syllabus —— should be developed in cooperation with the local advisory committee.

The teacher, preparing to write a course of study, should first become familiar with the syllabus' content column, adding any items needed for local effectiveness. The next step should be the realigning of content items into a teaching progression. In certain circumstances, with a class group demonstrating appropriate characteristics, the first lesson may coincide with the first content item of the syllabus, a discussion of the "Health Care Industry" in "Section 1: General Orientation." Where a well equipped facility already exists, and students are activity oriented, the first lesson may be "Routine Preliminary Data – Height, Weight," located in "Section 5 – Clinical Duties," or any other "hands-on" content which seems most effective. The units of content of the syllabus need not remain instructional entities, that is, "General Orientation," for example, need not be taught in a succession of lessons on this topic exclusively. This content may, instead, be reduced to basic components which can be incorporated into a lesson on content of possibly greater interest to the student. For example, one of the duties of the medical assistant is that of buffer between the physician and his patients, colleagues, and subordinate health workers. Role-playing this duty may be a better method of teaching "Health Team Titles" than would a lesson devoted exclusively to learning titles and their hierarchical status.

It is recommended that course objectives, like the syllabus objectives, be student-oriented. A method of development which may be useful is to use the generalized objective of the syllabus as a base, writing as many

truly *performance* objectives as are necessary to adequately define exactly *what the student can do, under what conditions,* and to *what level of proficiency* as a result of the instruction. In the section on "Body Structure and Function," for example, is instruction regarding "Fractures." The syllabus objective states that, *"The student should be able to:* Describe the characteristics which categorize fractures as simple, compound, or greenstick." When developing this unit for the local course of study, the teacher will need to write several additional, more specific objectives defining this skill, such as:

The student should be able to:
Define the general term, "fracture."

Describe the characteristics and symptoms of a simple fracture.

Describe the characteristics and symptoms of a compound fracture.

Describe the characteristics and symptoms of a greenstick fracture.

Student attainment of these enabling objectives would lead to the culminating objective of this instruction, as stated in the syllabus.

Completion of objectives for each unit of content will produce an acceptably complete course of study, but addition of a third column containing miscellaneous notations regarding use of audiovisuals, identification of references, and points of emphasis, will be of considerable assistance to the teacher when using the course of study to develop lesson plans.

A local course of study developed in this manner serves not only to state the breadth of instruction but also the depth, to clearly define what the instruction is expected to accomplish, and to provide built-in criteria for evaluation of both the instruction and the instructed.

THE LAW

The broad field of health care is carefully regulated by law for the protection of the general public, the individual patient, and the practitioner. The various "Practice Acts," like all statutes, are intermittently revised to accommodate changes in technology and health care needs. As a State Education Department syllabus, this publication reflects the regulations in effect during its development. The teacher's ever-revised course of study must, however, reflect the law as it exists at the time of instruction, *and also as it may reasonably be expected to be when the graduated student enters the labor market.* The teacher must ensure that the student

becomes familiar with the concept, equipment, and procedures involved in any such presently restricted techniques, but development of performance skills is not part of the course of study.

Instruction should, therefore, include not only that which is currently the duties of the medical assistant, but also that which is likely to have been included by the time the student seeks employment. It is imperative, however, that the student be fully informed of the then current legal restrictions on the *performance* of specific procedures by a medical assistant; that instruction in these restricted skills and knowledge is *future-oriented*, subsequent practice by medical assistants depending on revision of law.

CONTENT	OBJECTIVES	TEACHING SUGGESTIONS
◦ The Health Care Industry		
– History	*The student should be able to:* Describe major phases of the development of the health care industry. Associate important contributors with each major phase.	Have students research the history of the health care industry, then prepare an outline of its development, relating each facet to patient and community benefit. Have each student research in depth one area of health care, presenting the data to the class.
– Present	List the major health care agencies, and describe the services offered by each.	Describe the nature and function of the various health care agencies – federal, state, and local. Conduct field trips to various health care centers.
◦ Career Opportunities		
– The Health Team	Describe the current health care occupations employment market. Differentiate among health team members by title, job description, and interrelationship.	Describe the composition of the health care team. Have students clip health occupations opportunities from newspaper "want ads." Discuss duties, salaries, and probable growth of jobs in each employment area.

— Job Requirements	*The student should be able to:* Describe the personal, educational and experiential requirements of any teacher-specified major health care occupation.	Describe the general qualifications required for employment in specific health care jobs. Have students chart the requirements for each of the common health care positions.

SECTION II —— THE MEDICAL ASSISTANT

CONTENT	OBJECTIVES	TEACHING SUGGESTIONS
• Job Profile		
– Duties and Responsibilities	*The student should be able to:* List the major duties and responsibilities of a medical assistant.	Show the film "First Contact," or its equivalent. Using a medical office mockup, describe and role-play a medical assistant's typical day.
– Employment Conditions . Hours . Wages . Benefits . Environment . Personal fulfillment	Describe current, local conditions experienced by practicing medical assistants.	Have students research local employment conditions, then prepare a composite medical assistant's position. Have local practicing medical assistants, and a representative of AAMA discuss with students the job factors and personal qualifications of a medical assistant.
– Personal Qualifications . Physical competence . Education . Temperament . Physical appearance	Describe the qualifications which an individual must possess in order to become a medical assistant.	At various times during the course distribute a list of medical assistant qualifications. Have selected students violate specific standards of temperament and appearance. Have the remaining students return an evaluation of their performance.

◦ Interpersonal Relationships		
— Professionals — Peers — Patients — Nonmedical	*The student should be able to:* Demonstrate by day-to-day behavior, a commitment to good interpersonal relationships. Demonstrate in role-playing situations professionally proper behavior toward temperamental professionals, difficult patients, persistent sales representatives, and self-centered co-workers.	Introduce students to the principles of normal human behavior. Relate anecdotes from personal experience to emphasize the importance of good on-the-job interpersonal relationships. Have students develop and use scripts which illustrate good and poor relationships. Have students suggest means to avert or better resolve difficult situations.
◦ Personal and Patient Psychology		
— Human Emotional Development	The student should be: Acquainted with the stages of emotional development and their relationship to behavior.	Present the stages of emotional development by means of "case study." A film, such as "Case in Point," should be useful.
— Elements of Maturity	Aware of the existence of patterns of behavior which indicate a persistent emotional problem.	Encourage students to analyze behavior, responding to underlying causes rather than reacting to the behavior itself.
— Behavior Differences	*The student should be able to:* Recognize behavior patterns which are indicative of emotional problems. Demonstrate an ability to apply the principles of psychology in professional relationships.	Caution! Students must not be allowed to *diagnose* the behavior of individuals as being caused by specific emotional *problems*.

◦ Professional Ethics and Law		
— Regulatory Acts · Medical Practice · Nursing Practice	The student should be: Acquainted with those sections of the laws which define and limit the duties, authority, and responsibilities of various licensed professionals, and of nonlicensed support personnel. Aware of the application of the Acts to the position of Medical Assistant. *The student should be able to:* Describe the legal requirements for licensing of professionals, and the limitations placed on the activities of a medical assistant. Describe the required procedure in preparing reports to governmental agencies, such as birth and death certificates, narcotics control, and communicable diseases.	Discuss the "Practice Acts," emphasizing the applicability to the medical assistant and how the M.A.'s conduct affects the physician's legal standing as well as her own.
— Ethical Conduct · Confidentiality	Enumerate the principles of professional ethics as applicable to the physician/medical assistant/patient relationship. Identify those situations which require confidentiality, stating reasons why it is necessary.	Have students discuss the "Golden Rule" as applied to medical assistant behavior. Note that confidentiality is required for legal as well as ethical reasons. Give students "situation" sheets outlining on-the-job problems of confidentiality. Have students write solutions. Discuss the solutions.

. Consent forms	*The student should be able to:* Assist the patient in completing consent forms by explaining their purpose and answering questions.	Emphasize the critical importance of obtaining properly executed consent forms. The pamphlet "Medicolegal Forms with Legal Analysis" should be useful.
— Malpractice	Differentiate between negligence and malpractice, in teacher-supplied sample cases.	
	Describe those actions of the medical assistant which can help avert a malpractice suit.	Emphasize the legal importance of keeping clear, complete records, since they may be subpoenaed.
	Describe the actions and inactions of the medical assistant which could result in a malpractice suit.	The film "The Doctor Defendant" and the pamphlet "Physician's Liability" should be useful.
	Define, spell, and apply medicolegal terminology.	

CONTENT	OBJECTIVES	TEACHING SUGGESTIONS
◦ Basic Components – Cells – Tissues – Organs	*The student should be able to:* Identify and describe the types, structures, and characteristics of teacher-supplied cells, tissues, and organs, or graphic representations thereof. Describe in general terms, the functioning of cells, tissues, and organs.	Teach the technique of focusing a slide in a microscope. Project transparencies depicting characteristics of cells, tissues, and organs. Provide prepared slides for students' use in identifying characteristics. The films, "Tissues of the Human Body" and "Embattled Cell," should aid instruction.
◦ Skeletal System – Bones	Describe the functions of bone as tissue. Identify by name, classify, and state the functions of any teacher-specified human bone.	Project transparencies of internal and external views of a typical long bone, and describe its composition. Using a model skeleton, name and classify long, short, flat, and irregular bones, and state the main function of each. Obtain a long bone which has been halved lengthwise. Have students identify parts.
. Fractures	Name and describe the various types of fracture. Identify teacher-supplied visuals of fractures as either simple, compound, or greenstick.	Define the term "fracture." Have students use medical dictionary to define each type fracture. Project transparencies of the types of fracture.

	The student should be able to:	
	Immobilize an injured part in which a fracture may be present.	Demonstrate immobilization of various parts of the body through use of sling, splints, and casts, and the proper techniques of removal. Emphasize the importance of supportive bandaging. Have students practice on each other.
	Safely remove bandages, slings, and casts from an injured part.	The film, "First Aid Care in Fractures," should be useful.
. Disorders and Diseases	Define the major bone disorders and diseases.	Discuss such problems as osteomyelitis, osteoporosis, scoliosis, tumors, and rickets.
	Describe the causes, symptoms, and standard preventative procedures used for each major disorder and disease.	Have students use the medical dictionary and reference books.
— Joints	Locate, on models or photographs, and identify diarthrosis, amphiartrosis, and synarthrosis joints.	Use a skeleton model to show the location and demonstrate the movement of the six types of diarthrosis joints and two types of synarthrosis joints.
. Cartilege	Locate and describe the function of cartilege.	Give students diagrams of various joints. Have them draw arrows to show ranges of movement.
. Disorders	Define the terms and describe the symptoms of such disorders as arthritis, dislocation, gout, sprain, and degenerative diseases.	

	The student should be able to: State the cause of any teacher-specified disorder of the joints.	
	Demonstrate the use of elastic bandages on sprains of the ankle or wrist.	Have students role-play the medical assistant applying elastic bandage to the physician-diagnosed sprain. Emphasize care in not applying too tightly.
◦ Muscular System		
— Muscles	Identify on a visual representation, and define, the three principle muscle types.	Prepare microscope slides of different animal muscle fibers. Have students view the slides and describe how the fibers differ.
— Tendons	Describe how muscles are attached to the bones.	
— Ligaments	Locate, and describe the functioning of any teacher-specified muscle.	Use manikins, charts, and such films as "The Human Body — Muscular System" and "Facts About Backs."
		Have students work in pairs to study the action of muscles involved in such movements as raising the arm.
— Disorders	Name and define the major disorders and diseases which affect the functioning of the muscles.	Instruction should extend from such simple disorders as fati[illegible]nd "stiffness" through such [illegible] complex conditions as paraly[illegible]nd dystrophy.
		Make a field trip to a rehabilitation center to observe the success of muscle retraining.

▪ Circulatory System		
	The student should be able to:	
— Heart	Locate the position of the heart within the human body, and describe its appearance and functioning.	Visuals are extremely important in this instruction. A carefully selected variety of charts, models, and transparencies or slides should be used.
	Identify and classify the parts of the heart, and describe the structure and functions of each.	Have the students dissect a calf or sheep heart and identify the parts.
		Have students use the stethescope to listen to each others heart and identify sounds.
— Vessels	Identify arteries, veins, and capillaries, and describe their function.	
	Describe the flow of blood through both general and pulmonary circulation.	
	Accurately determine pulse rate and blood pressure, and record the readings.	Have students take each others pulse and blood pressure in standard positions, both at rest and after exercise.
		Useful films include: The Heart and How It Works; High Blood Pressure; Pulse of Life; Circulation of the Blood; and Hemo, the Magnificent.
— Blood	Identify plasma, erythrocytes, leukocytes, and thrombocytes.	Demonstrate the preparation of hematocrits to show the components of blood.

	The student should be able to: Explain ABO blood types and the RH factor.	Have students determine their blood types through standard procedures.
	Explain the mechanisms of blood clotting.	
	Describe the relationship between the blood and the spleen.	
— Disorders	Name and describe the characteristic symptoms of common disorders of the circulatory system.	
— Health Maintenance	List the standard methods of prevention of circulatory disorders.	Instruction should include proper nutrition, adequate rest, regular exercise, prevention and treatment of infections, and periodic evaluation of physical condition.
◦ Respiratory System		
— Trachea	Identify the organs of respiration.	Use transparencies, charts, and manikin to trace inhalation and exhalation — nostrils to air sacs. Show the function of ribs and diaphragm.
— Bronchi		
— Lungs	Trace the path of air of external and internal respiration, explaining the principles involved.	Explain the principle of exchange of gases. Describe the exchange of oxygen and carbon dioxide in the lungs, and between the body cells and the capillaries.
	Describe the part which the blood plays in the respiratory system.	Show the film: "The Human Body — Respiratory System."

— Disorders	*The student should be able to:* Name and define the major disorders affecting respiration.	Instruction should include bronchitis, cancer, emphysema, "common cold," diptheria, laryngitis, tonsillitis, and tuberculosis. Emergency first-aid measures, such as mouth-to-mouth resuscitation and external cardiac massage, should be taught. An objective discussion of the effects of smoking on smoker, and on others, must be included. The film, "Pulse of Life," should be useful.
— Health Maintenance	Describe methods used to prevent infection and contamination. The student should be: Acquainted with the various public and private-nonprofit agencies devoted to the containment/elimination of respiratory disorders.	The student should have a "working knowledge" of public health laws and their implementation. Standard methods of prevention and treatment should be discussed. *Caution!* Emphasize the legal and professional inability of the medical assistant to diagnose or prescribe!
◦ Digestive System — Mouth — Esophagus — Stomach	*The student should be able to:* Name, locate, and describe the function of each organ of the digestive system.	Instruction should include such accessory organs as teeth, tongue, and liver, and the gall bladder, pancreas, and salivary glands.

— Glands — Intestines . Large . Small	*The student should be able to:* Name, locate, and describe the function of each gland which provides juices or enzymes to the digestive process. Trace the path of food from the mouth to the anus, explaining the principles of digestion and absorption. Describe the part which the blood plays in the digestive system.	Distribute diagrams of the gastro-intestinal tract. Have students trace the path of food, labeling the organs and glands. Distribute a diagram of the structure of the villus. Have students label the parts and describe the process of absorption. Three useful films are: The Digestive System; Human Gastric Function; The Human Body — Digestive System.
— Disorders	Name, and describe the symptoms of, the common disorders of the digestive systems.	Instruction should include such disorders as appendicitis, carcinoma, gallstones, gastro-enteritis, hemorrhoids, hernia, and ulcers, and symptoms such as constipation, diarrhea, and jaundice.
— Poisons — Drugs	Describe the readily-observable symptoms which indicate that caustics, heavy metals, or destructive compounds have been ingested, or that an overdose of drugs has been taken.	The medical assistant should be alert to such symptoms as unusual odors from the mouth of a person suffering severe gastric disturbance — an indication that perhaps gasoline has been swallowed. The Assistant should immediately alert the physician to the *possibility* of poisoning.

◦ Urinary System	*The student should be able to:*	
– Kidneys	Name, locate, and describe the function of each organ of the urinary system.	An overhead projector with polatron attachment can be used to show the filtration process in the nephron unit.
– Ureter		
– Bladder	Trace on a chart the flow of urine through the system.	Have students label diagrams of a simplified nephron unit, and a vertical cross-section of a kidney.
– Urethra		Bisect lengthwise a lamb or sheep kidney. Identify the parts.
		Show the films: Accent on Accuracy; The Human Body – Excretory System.
– Disorders	Name the common disorders of the urinary system, and describe the symptoms of each.	Instruction should include calculi, cystitis, nephritis, nephrosis, pyelitis, pyelonephritis, strictures, and ptosis of ureters, tumors, and uremia.
◦ Reproductive System		
– Male	Name, locate, and describe the function of each organ of the male reproductive system.	Transparencies and diagrams should be used to show the position, function, and functioning of testes, tubes, seminal vesicles, prostate and Cowper's glands, urethra and penis.
. Disorders	Name the common disorders of the male reproductive system, and describe the symptoms of each.	Instruction should include cryptorchidism, infections, inguinal hernia, phimosis, prostatitis, sterility, and tumors.

		The films "The Human Body — Reproductive System," and "A Half-Million Teenagers" should be useful.
	The student should be able to:	
— Female	Name, locate, and describe the function of each organ of the female reproductive system.	Transparencies and diagrams should be used to show the position, function, and functioning of ovaries, fallopian tubes, uterus, and vagina. The menstrual cycle, and conception should be discussed.
. Disorders	Name the common disorders of the female reproductive system, and describe the symptoms of each.	Instruction should include salpingitis, tumors (malignant and benign), sterility, and menstrual disorders. Show the film, "Breast Self-Examination."
— Pregnancy	List and describe the signs and symptoms of pregnancy. List and describe the signs and symptoms of labor.	Describe such subjective and objective symptoms of pregnancy as amenorrhea, nausea, breast enlargement, enlargement of the uterus, and weight gain. The films,"Thread of Life" and "The First Two Weeks of Life," and the pamphlet "Pregnancy In Anatomical Illustration" should be useful aids.
. Disorders	List common disorders of pregnancy and the symptoms of each, and state the usual causes of each disorder.	Instruction should include toxemia, ectopic pregnancy, and natural abortions.
— Menopause	Define the term and describe the physical and psychological affects.	

◦ Nervous System		
	The student should be able to:	
— Components . Central . Peripheral . Autonomic	List the parts of the nervous system, from neuron to brain.	Use transparencies and anatomical charts of the brain, spinal cord, and neuron in explaining their functions.
	Label the parts of the nervous system as shown on teacher-supplied drawings.	Have students dissect a sheep or calf brain, locating such structures as the cerebellum, cerebrum, medulla, convolutions, and hemispheres.
	Identify, classify, and describe the function of the Central Nervous System.	
	Identify, classify, and describe the function of the Peripheral Nervous System.	Instruction should include discussion of the senses.
— Disorders	List the characteristic symptoms of such disorders as cerebral palsy, CVA, encephalitis, epilepsy, meningitis, neuritis, neuralgia, and poliomyelitis.	Field trips to treatment and rehabilitation facilities, such as a cerebral palsy center, should be very instructive. The film, "Essentials of the Neurological Examination" should be used.
— Special Organs . Eye . Ear . Nose . Tongue	Identify the structure of the eye, ear, nose, and tongue and describe the function of the various parts.	Use models to identify the structure of the organs.
	Identify readily observable symptoms of such disorders as cataracts, conjunctivitis, deafness, glaucoma, hyperopia, myopia, ophthalmia, otitis media, and strabismus, and of injuries.	Have students trace the path of light from cornea to brain, and from tympanic membrane to brain, on teacher-supplied diagrams. The films, "Gateways to the Mind," and "The Human Body — Sense Organs," should be effective aids.

◦ Endocrine System		
	The student should be able to:	
— Glands	Name, describe, and locate the glands of the endocrine system, and describe the effects of each on body activities.	Explain the classification of glands as exocrine or endocrine. Explain the difference between external and internal secretions. Have each student prepare a chart naming the glands and stating their locations, principal functions, and hormones secreted.
— Disorders	Describe the characteristic symptoms and state the causes of Addison's Disease, diabetes mellitus, dwarfism, gigantism, hyperthyroidism, hypothyroidism, and tetany.	Discuss common thyroid function tests, such as BMR, PBI, RAI, and thyroidscan.
◦ Integumentary System		
— Components . Skin . Glands . Hair . Nails	Identify the parts of the skin, including the accessory organs, and describe their functions.	Use models or diagrams in describing the structure of hair, nails, and the layers and glands of the skin. Have students study a hair under the microscope, then identify its parts.
— Disorders	Describe the characteristic symptoms and state the causes of acne, alopecia, carbuncles, dermatitis, impetigo, psoriasis, ringworm, and scabies.	Emphasize the importance of proper care of the skin and its appendages.

◦ Preventative Medicine	*The student should be able to:* Identify and describe the general measures used to prevent disease.	Instruction should include adequate exercise and rest, proper hygiene and nutrition, and immunizations. The film, "Immunization Against Infectious Diseases" should be an effective aid.
◦ Rehabilitative Medicine	List and describe the general methods of occupational and physical therapy prescribed for geriatrics, paraplegia, arthritis, and muscular disorders.	Explain the application of such methods as arts and crafts, diathermy, passive exercise, ultrasonics, and whirlpool baths, and describe the processes. Field trips to rehabilitation facilities should be informative.
◦ Nutrition and Diet Therapy	List the essentials of normal nutrition, and state their uses by the body. Describe a normal diet incorporating the "Basic Four." Describe, by identifying included and excluded substances, such special diets as diabetic, high and low calorie, high protein, low fat, salt free, and soft.	Define food metabolism. Describe the essentials of normal nutrition and list the foods which comprise the "Basic Four" of a normal diet. Relate special diets to the disorders necessitating their use. Include anemia, cholelithiasis, colitis, diabetes, heart disease, hypertension, and peptic ulcer. The films, "Balance Your Diet for Health and Appearance," and "The Human Body — Nutrition and Metabolism" should prove helpful.

- Postnatal Development
  - Infancy
  - Childhood
  - Adolescence
  - Adulthood
  - Old Age

The student should be able to:

List the important changes in body systems and organs during the human lifespan.

Describe body changes involved in the aging process.

Discuss intellectual, emotional, and behavioral development of the child.

Make field trips to nursery, day care, and extended care facilities for observation of various age groups, their problems, and responses.

Make a survey of social service facilities for the elderly.

Have students observe children so that they can obtain skills in identifying key stages in emotional and intellectual development.

SECTION IV —— ADMINISTRATIVE DUTIES

CONTENT	OBJECTIVES	TEACHING SUGGESTIONS
◦ Reception		
— Mode	*The student should be able to:*	
. Telephone	Conduct business via telephone, transmitting and receiving, and recording all information accurately and to field standards of manner and procedure.	Describe the various techniques and manners proper for calls from patients, hospitals and pharmacies, laboratories, insurance and pharmaceutical agents, telephone services, and other physicians. Have students dramatize the discharge of telephone responsibilities. Emphasize importance of good grammar and diction. The teletrainer is an excellent aid. The film, "A Manner of Speaking," and the pamphlet, "Winning Ways with Patients" should be useful.
. Personal Contact	Demonstrate the acceptable manner of meeting visitors to the office. Determine the needs of visitors through a personal-verbal approach.	Emphasize the importance of blending efficiency with empathy, sympathy, and tact. Dramatize the techniques of serving the various types of visitors. Emphasize the recognition and accommodation of the psychological and physical needs of the patient.

	The student should be able to: Verify appointments and enter patients' names and times of arrival in a sign-in book.	Emphasize importance of the sign-in book as a record of who actually visited the office, and at what time.
— Appointments		
. Scheduling	Maintain a daily appointment book, which makes efficient use of the physician's time, while allowing for emergency and unscheduled priority visits.	Emphasize the need to accept as part of the job, the continual revising of the appointment book.
. Rescheduling	Reschedule persons who must delay appointments, filling the openings with patients who wish to see the physician sooner.	Using overhead projection, dramatize the scheduling and rescheduling of appointments on a transparency "appointment book." Show the film, "First Contact — The Medical Assistant."
. Follow up	Schedule future appointments for routine follow up of treatments, hospital admission or discharge, or diagnostic tests and X-rays.	Provide sample appointment book forms and patient data which indicates follow up. Have students enter appropriate appointments.
— Histories		
. Personal . Family . Medical	Obtain by interview, the information required to complete a patient-history form, and record the data in proper medical terminology.	Acquaint the students with various commonly used patient-history forms. Emphasize the critical importance of correct terminology. Prepare scripts of "patient" histories. Assign students to be "patients," and others to interview them, recording their script histories on prepared forms.

— Patient Appraisal		
. Communicable Diseases	*The student should be able to:* Describe the readily observable symptoms of common communicable diseases. Describe appropriate action upon receiving a patient suffering a communicable disease.	*Caution!* The medical assistant is not a "junior diagnostician." Recognition here is limited to such evident symptoms as swollen glands, skin eruptions, and chronic cough. Demonstrate tactful removal of person with probably communicable disease, from common waiting room. The films, "Communicable Diseases" and "Infectious Diseases and Natural Body Defenses" should be helpful.
. Emergencies	Describe the readily observable symptoms indicating need for immediate medical treatment. Describe appropriate reactions to common emergency situations.	Discuss common emergency situations, the signs that they exist or are about to, and action to be taken. Show the film, "First Aid." Emphasize that first-aid is necessary action taken while awaiting professional attention and that the assistant must know where to contact the physician — or a "covering" physician — at all times.
. Patient Comfort	Describe the temperature, humidity, and air-exchange levels necessary for patient comfort. Prepare and use a check-list of physical conditions in the office which affect patient comfort.	Rotate student responsibility for maintaining standards of light and cleanliness, condition of chairs, supply of magazines, and — where possible — heat, humidity, and ventilation, in the office mock-up.

◦ Clerical		
— Indexing/Filing	*The student should be able to:* Maintain an efficient system of filing patient records.	Instruction should include all systems of alphabetical filing commonly used in medical offices.
. Patients	File new records in appropriate places.	Have students build a dummy file. Emphasize proper placement of names prefaced by D', de, and Di; Mac and Mc; Le, La, and von.
	Locate specific records, extract needed information, and return the records to their place.	Have students practice extracting such information as diagnoses, medications, and test reports from the records of specific "patients."
. General	Maintain an efficient system of filing bills, charts, correspondence, and professional publications.	Have students separate an assortment of items into appropriate categories, then file each group, with cross referencing where applicable.
— Recordkeeping		The teacher should be familiar with the State syllabus for a course in Recordkeeping.
. Financial	Record services rendered and fees due.	Demonstrate various techniques of recording payments.
	Record fees received, and provide patients with receipts.	Project a transparency of a disbursement sheet containing columns for supplies, medicines and drugs, equipment and repairs, and linen service.
	Record payment of bills in the proper column of a disbursement sheet.	Demonstrate how debits and credits are posted, and how to arrive at a balance.
	Debit charges, record credits, and balance the ledger or log for the day.	

. Payroll	*The student should be able to:* Calculate and record deductions from employee salaries.	Instruction should include use of tables for deducting Federal and State income taxes, F.I.C.A., and insurance premiums according to salary levels and dependents claimed.
. Clinical	Obtain and enter medical data on the patient's chart.	Emphasize the critical importance of accuracy and use of correct medical terminology. Demonstrate how a patient's chart is set up, and how information is entered.
. Inventory	Demonstrate in a simulated practice, an ongoing inventory routine for maintaining office, medical, and laboratory supplies.	Discuss the responsibility of the medical assistant for safely and efficiently storing supplies and ordering replacements; safeguarding and monitoring use of controlled drugs; disposing of overage medications. Emphasize the need for strict compliance with drug and narcotic laws. Have students practice maintaining a simulated office medicine cabinet and related inventory and record sheets.
— Typewriting	*(Students should have completed a Business Education Program one-year course in typewriting at the time of completion of Medical Assistant study.)*	
. Business Correspondence	Compose, and type in current format, a clear, concise, and courteous business letter.	Describe how business letters differ from professional letters.

. Professional Correspondence	*The student should be able to:* Compose and type in current format, a clear, concise, and properly phrased professional letter. Explain the difference between business and professional correspondence.	The student should be familiar with the use of carbon paper and sets, correction tape and fluids, special papers, and proofreader's symbols (standard proof marks).
. Manuscripts	Type a final version of a draft manuscript, the finished copy conforming to all applicable professional and literary standards.	Discuss the role of the medical assistant as research assistant. Have students practice the medical assistant's typing duties – preferably through cooperative planning with teachers of courses in typewriting.
. Forms	Obtain and type in all data necessary to complete common forms.	Instruction should include narcotics reports, police reports, vital statistics, communicable diseases, hospital forms, and commitment of mental patients.
– Business Machines . Adding Machines and Calculators	Perform standard daily procedures on any common type mechanical or electronic mathematics process machine. Change paper tapes and perform other simple maintenance which the manufacturer states is within the capabilities of the operator.	Instruction should include practice on a variety of machines, since the school cannot know which brands will be provided in places of employment.
. Recording and Transcribing Machines	Operate common types of dictating machines. Transcribe recorded material into acceptable typewritten copy.	Discuss the various types of correspondence which are transcribable.

	The student should be able to:	
. Copy Machines	Set up and operate common types of copy machines. Make adjustments necessary to produce sharp, clear copies. Perform routine maintenance procedures.	Instruction should include loading of paper and fluids, and performance of any maintenance which the manufacturer states is within the capabilities of the operator.
— Postal Services		
. Classifications	Categorize mailable items into standard postal classifications, and identify items which cannot be mailed. Complete necessary forms for Registered or Certified Mail. Conform to regulations in preparing and addressing a package for Parcel Post.	Provide a list of mailable items. Have students classify each as First, Second, Third, or Fourth Class Mail; Registered, or Certified Mail; Air Mail; Special Delivery; Parcel Post. Information booklets can be obtained from the postmaster.
. Incoming Mail	Open, sort, and direct mail through proper channels.	Instruction should include methods of opening, sorting, and screening mail; handling mail in the physician's absence; and handling incoming X-rays. Students should be able to separate mail into correspondence, magazines, journals, samples, and "junk mail." Emphasize the importance of checking return addresses to keep files current.
— Physician's Calendar		
. Non-patient Appointments	Maintain a calendar or date book separate from, but coordinated with, the patient appointment book.	Differentiate between business appointments (attorneys, insurance agents, pharmaceutical and laboratory representatives) and

	The student should be able to:	
	Confirm all dates and list any follow-up action to be taken.	professional appointments (lectures, seminars, conferences, and medical meetings). Emphasize the importance of entering *all* appointments in *both* the patient and nonpatient books, in order to prevent overlap and conflict.
. Travel Plans	Complete the details of a planned trip. Arrange for air and surface transportation, lodging, and communication while away. Prepare a trip itinerary.	Define such terms as itinerary, lodging, and accommodations. Describe what is required in making reservations directly or through agencies, obtaining car rentals and travelers' checks, in developing timetables, and in determining possession of travel funds, credit cards, and pertinent papers and materials.
◦ Medical Economics		
— Fees	Explain to the patient the fee for services rendered or for prescribed treatments.	Explanations should include fees for office visits, hospital care, and house calls, for surgery, and for consultation.
. Routine Payments	Write a receipt for payment of fee.	Demonstrate various techniques of handling cash payments.
. Delinquent Accounts	Describe collection techniques appropriate to the specific circumstances of various sample cases of payment delinquency.	Instruction should include direct telephone contact; contact by First Class Mail, then by Certified Mail—Return Receipt; and use of collection agencies.

		Describe when delinquents should be referred to government or charitable agencies to determine eligibility for inclusion in health service payments, when small installments should be suggested, and when tactful firmness should be displayed.
— Banking		
	The student should be able to:	
. Checking Accounts	Write a check, complete the check record, and maintain a running balance.	Discuss the medical assistant's responsibility for maintaining a neat and legible, as well as accurate and balanced check book.
	Write a deposit slip, enter the amount in the check record, and maintain a running balance.	Distribute simulated checking account forms and a list of bills and deposits. Have students write checks and deposit slips, maintain a running balance, and reconcile a subsequently provided "bank statement."
	Reconcile a bank statement.	
. Petty Cash	Enter disbursements in a petty cash record book.	Discuss the various uses of a petty cash fund.
	Balance a petty cash ledger.	Have students maintain a petty cash record for such disbursements as postage stamps, delivery charges, and light bulbs, then balance the ledger.
— Medical Insurance		
. Types	List the major types of medical insurance and a distinguishing feature of each.	Discuss such privately administered insurance as Blue Cross, Blue Shield, and G.H.I., and public programs such as Medicare,

		Medicaid, and Workmen's Compensation.
. Processing	*The student should be able to:* Obtain and type in all information necessary to complete any standard medical insurance form.	Make transparencies of various insurance forms. Project, discuss, and demonstrate proper completion. Distribute simulated forms and "situation sheets." Have students complete forms from the supplied information.
◦ Housekeeping		
— Facilities . Reception Room . Consultation Room . Examining Rooms . Laboratories . X-Ray Room . Business Office . Lavatories . Store Rooms	Describe the facilities and equipment therein, necessary for efficient discharge of specific physician's-office procedures.	The school facility in which a course in medical assisting is taught, should be constructed to simulate the modern physician's offices.
— Procedures	Inspect the facilities and equipment for conformance with regulations and standards of cleanliness, safety, comfort, and readiness for use. Restock supplies and equipment. Personally perform cleaning and maintenance procedures, or insure adequate performance of these duties by others.	Describe a typical housekeeping routine. Have students prepare a checklist for a housekeeping routine tailored to the simulated physician's offices. Have students maintain the simulated offices in accordance with the checklist, each student serving in turn as the medical assistant responsible for achieving conformity to standards.

— Physician's Bag . Cleaning . Maintaining	*The student should be able to:* Clean and check the physician's bag each day, noting expiration dates on medicines, recording narcotics used, removing specimens for processing, and replenishing standard supplies.	Show the items usually carried in the physician's bag. Demonstrate how they are packed, and how the bag is stored when not in use. Have each student list the items carried, their disposition in the bag, and the necessary maintenance.

SECTION V —— CLINICAL DUTIES

CONTENT	OBJECTIVES	TEACHING SUGGESTIONS
◦ Asepsis and Sterilization		
— Microbiology	*The student should be able to:*	
. History	Identify the important contribution to microbiology of each specified person.	Have students research the work of such scientists as Holmes, Koch, Leeuwenhoeck, Lister, and Pasteur. Provide a list of scientists and of important advances in microbiology. Have the students match the lists.
. Pathogens and Nonpathogens	Name and define the various types of microorganisms.	Project microscope views of various organisms. Identify by type and discuss their effects upon a human host.
	List the diseases caused by specific organisms.	Have students view prepared slides through a microscope, identifying the organisms thereon, stating their effects -- — pathogenic or benevolent — and the means by which each is introduced into the body. Emphasize! *All* microorganisms are not harmful, many being necessary to body functions.
. Means of Transmission	Describe the means by which the various microbes are transmitted to new hosts.	
— Asepsis		
. Medical	Wash hands for routine control of contamination.	Demonstrate handwashing techniques. Explain its value. Discuss the circumstances when handwashing is necessary.

	The student should be able to:	
. Surgical	Complete the surgical scrub necessary to assist in office surgery.	Demonstrate the surgical scrub. Have students practice scrubbing.
	Dispose of contaminated materials.	Demonstrate proper methods of disposal, including handling contaminated materials with forceps.
	Clean equipment in preparation for sterilizing.	Instruction should include the use of soap and water, and of alcohol as control agents, and selection for specific uses.
— Sterilization		
. Agents	Define the terms: antiseptic, disinfectant, fungicide, germicide.	Describe how each classification differs, and how each works.
	Classify any specific agent.	
. Methods	Select the proper agent for a specific sterilization.	Instruction should include the autoclave, boiling, dry heat, and chemicals.
. Procedures	Sterilize instruments, glassware and rubber goods, towels and other fabrics, and solutions.	State the method to be used for sterilizing particular pieces of equipment and supplies.
		Emphasize the importance of temperature and time in the sterilization process.
. Application	Handle, set up, and use sterile equipment according to aseptic procedure.	Emphasize the importance of sterile technique and the consequences of contamination.
		Demonstrate the technique of unwrapping autoclave goods.

		Have students prepare a sterile tray, using transfer forceps, and observing the rules for setting up a sterile field. The film, "Sterilization Procedures for the Medical Office," should be useful.
◦ Examination Procedures		
	The student should be able to:	
— Room Preparation	Set up for a complete physical examination.	Develop a check list of points to be noted.
. Climate Control	Maintain proper temperature and humidity.	Emphasize the importance of proper climate to the health as well as the comfort of the patient.
. Maintaining Readiness	Perform routine and aseptic procedures necessary between patients.	Have students list the routine equipment in a set up for complete physical examination.
. Assisting	Demonstrate in a simulation, the duties of the medical assistant during a physical examination.	Instruction should include preparation of the patient, assisting the patient onto and off the examining table, aiding the physician, and preparing the room for subsequent use.
— Preliminary Data		
. Weight	Obtain correct weight on the physician's balance-beam scales.	It is beneficial, but not necessary, that students understand the principle of the balance-beam scales.

. Height	*The student should be able to:* Obtain correct height with the physician's scales slide. Demonstrate correct procedure for measuring infants. Record data on the patient's chart.	Instruction must include accurate conversion of total inches to feet and inches. While students should be familiarized with the metric system throughout their education, emphasis in Medical Assisting should remain on the English system until physician's begin using metrics for this data. Use baby manikin. Emphasize the importance of strict adherance to safety procedures.
. Vital Signs		
Temperature	Identify the different type thermometers. Obtain oral, rectal, and axillary body temperatures. Record temperature on the patient's chart. Prepare the thermometer for subsequent use.	State the range of "normal" temperatures. Explain the significance of body temperatures. Demonstrate how to hold and insert the thermometer, how to find the mercury column, how to determine the indicated temperature, and how to "shake down" the mercury. Emphasize the importance of prompt and thorough cleaning and disinfecting of thermometers, and of guarding the patient's privacy when obtaining rectal temperature.
Pulse	State the normal pulse rate and explain increase and decrease variations.	Show location of pulse-taking arteries. Have students play Medical Assistant and patient. The Medical Assistant will

	The student should be able to: Count, describe, and record the patient's pulse.	count the pulse while patient is standing, sitting, and after running.
Respiration	State the normal respiration rate and explain the reasons for variations. Count, describe, and record the patient's respirations.	Have students role-play medical assistant and patient. The medical assistant will count, describe, and record the respirations while the patient is standing, sitting, and after running.
Blood Pressure	State the normal range of blood pressure, and list the factors which cause high or low variations, both temporary and chronic. Obtain, describe, and record the patient's blood pressure.	Describe the physiology of the blood, including the factors which affect pressure. Project transparencies of the calibrations of the sphygmomanometer. Demonstrate its use on a student model. Have students play medical assistant and patient. The medical assistant will assemble the equipment, greet the patient and explain the procedure, and obtain blood pressure while patient is sitting and lying down, both before and after exercise.
– Preparing the Patient		
. Physically	List the various patient positions for examination, describe each, and state the type of examination for which each is used. Explain in everyday language, how each position is assumed.	Instruction should include Sims, lethotomy, knee-chest, dorsal recumbent, prone, and horizontal. Using a student model, demonstrate the functions of the medical assistant instructing

	The student should be able to:	
	Position and drape a patient in any of the commonly used positions.	and aiding a patient to assume the various positions, draping the patient, and preventing discomfort and embarrassment.
. Emotionally	Demonstrate an empathy for the mental and emotional stresses of the patient to be examined.	Emphasize sensitivity. While medical personnel become completely objective in examining a human body, the patient whose body is being examined seldom is so emotionally detached.
◦ Assisting the Physician		
— Tray Set-ups		
. Diagnostic	Set up equipment for any standard diagnostic test.	Instruction should include the preparation and function of equipment on trays for such specialties as ear, nose, and throat, sigmoidoscopy, gynecology, obstetrics, neurology, and pediatrics, and for such tests as audiometry, E.C.G., skin, and visual acuity.
. Medication	Set up equipment for standard treatments performed by various medical specialists.	
. Minor Surgery	List and identify instruments and supplies commonly used in office surgery, and prepare tray set-ups.	Instruction should include suture and suture removal, incision and drainage of abcess, excision and biopsy.
	Prepare the patient for minor surgery.	Describe types of anesthesia used in minor surgery. Discuss the patient's emotional state. Emphasize asepsis.
	Clean, sterilize, and dispose of all materials used.	
— Dressings and Bandages	Apply gauze dressings.	Have students practice applying and removing various dressings and bandages to simulated wounds.
	Apply cravat, elastic, roller, triangular, and tubular bandages.	

	The student should be able to:	
	Remove adhesive tape, dressings, and bandages, disposing of contaminated materials in accordance with accepted procedure.	Emphasize caution in not bandaging too tightly.
– Splints	Assemble and prepare materials for the application of splints to any designated specific injury.	Demonstrate the use of various splints, their application and removal. Have students practice application and removal of splints. *Caution!* The students should "know how to," but applying and removing splints is not the responsibility of a medical assistant.
– Casts	Prepare the patient for application or removal of a cast. Assemble and prepare the materials needed for casts.	Demonstrate application and removal of a cast on a simulated fracture. Emphasize safety procedure. Have students practice applying casts – to better understand removal procedures – to simulated fractures of other students, then properly remove them. Close supervision is necessary.
– Preparing for Injections	Select equipment and medicines necessary for any specific injection or collection.	Instruction should include intradermal, intramuscular, subcutaneous, intravenous, and intra-articular injections, capillary and venous blood samplings, and throat and wound abcess cultures. Discuss the purposes of each, and the types and sizes of syringes and needle and other equipment needed.
– Collecting Samples . Blood . Cultures	Prepare a tray for any specific injection or collection. Care for equipment after use, and secure it according to State regulations between and during uses.	

	The student should be able to: Prepare and label samples for laboratory testing.	*Caution!* Emphasize the requirement of law that only the licensed professional will fill the syringe and immediately inject the medication, or will obtain blood or culture samples, and that injection equipment must be registered, secured, and accounted for in compliance with State regulations. Have the students prepare a chart filling-in under the following column headings: Type of Injection; Site; Purpose; Size of Syringe; Gauge and Length of Needle. The film, "Technique of Parenteral Medication," should be useful.
◦ Pharmacology — Controlled Substances . Narcotics . Sedatives . Stimulants . Depressants . Analgesics	Locate in a P.D.R., and transcribe on index cards, the type of medication, dosages, method of administering, and contra-indications for any specific commonly used drug. Enter narcotics into a record book in compliance with regulations of the Bureau of Narcotic & Dangerous Drugs.	Give students a list of commonly used drugs. Have them search the P.D.R. for necessary information. Have students enter narcotics into a simulated record book. Emphasize the critical importance of strict and unfailing compliance with the law!
— Prescriptions	Write common prescription abbreviations.	Have students practice writing and translating commonly used abbreviations.

	The student should be able to:	
	Translate prescriptions into everyday language in instructing the patient.	Give simulated prescriptions to the students. Have them translate the terms into layman's language, and instruct a "patient" as to dosage and usage.
– Storage		
. Maintaining Potency	Store drugs according to classification. Maintain supplies by label expiration dates. Refrigerate drugs as required. Maintain a drug inventory.	Have students practice maintaining a cabinet of simulated drugs.
. Theft Prevention	Demonstrate responsibility for drug supplies by keeping the cabinet locked except when actually in use.	Have students, in turn, be responsible for the "drug cabinet." Closely observe them for conscientiousness in security measures.
◦ First-Aid		
– Assisting the Physician	Locate or set up an emergency tray.	Discuss the possible emergency situations which might occur. Have students practice proper response to a sudden statement that a specific emergency exists. Describe the contents of an "always-ready" emergency tray.
. Emergency Drugs	Efficiently locate and provide drugs required by the physician. Measure, pour, or count out dosages of oral medications, for the physician's verification and use.	Show techniques of preparing dosages. Emphasize the need for *exact* measurement even in an emergency, and for the physician's check thereof.

— In Physician's Absence

The student should be able to:

Administer first-aid as defined and prescribed by the American Red Cross, or physician's standing orders.

Contact the physician, or the designated covering physician in accordance with the physician's standing instructions.

It is recommended that all students be American Red Cross certified in first-aid. An 8-hour multimedium course of instruction is available through most local Red Cross chapters.

Have students provide first-aid in sudden emergency simulations.

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CONTENT	OBJECTIVES	TEACHING SUGGESTIONS
◦ Standard Procedures		
– Urinalysis	*The student should be able to:* Perform a routine urinalysis for physical properties.	Describe the patient conditions which would require that a physical properties urinalysis be performed. Define the meniscus as related to the specific gravity. Explain what pH indicates. Have students perform and record their personal urinalysis.
	Perform a routine urinalysis for chemical properties.	Describe the patient conditions which would require that a chemical properties urinalysis be performed. Demonstrate the use of commercial test substances such as Lab Stix, Clinitest Tablets, and Acetest Tablets. Have students select the necessary test materials and equipment, then perform and record their personal urinalysis.
	Perform a microscopic urinalysis.	Describe the conditions which would require performance of a microscopic urinalysis. Project a diagram of red and white blood cells, casts,

		epithelial cells and crystals, and indicate the characteristics and clinical significance of each.
		Demonstrate the techniques of preparing a specimen for centrifuge, and of "spinning down" to obtain sediment.
		Have students centrifuge a specimen and prepare a sediment slide. Have them examine the slide, identifying components and charting the results.
– Hematology	*The student should be able to:* Perform a hemoglobin determination.	State normal hemoglobin values.
		Explain anemia and its relationship to hemoglobin.
		Obtain capillary blood. Prepare and test a specimen in the hemoglobinometer. Show how a reading is obtained.
		Provide students with blood specimens. Have them test for hemoglobin and record the results.
	Perform a hematocrit determination.	State normal hematocrit values. Explain the relationship of hematocrit to anemia.
		Obtain capillary blood. Centrifuge a specimen. Show how a reading of red cell percentage is obtained.

	Have students draw a specimen from a practice model, centrifuge it, and perform a hematocrit determination.
The student should be able to: Calculate and record a red cell count.	State the normal white and red cell counts for men and for women.
Calculate and record a white cell count.	Demonstrate how a sample is diluted, mounted on a counting chamber, and counted, and how RBC and WBC is calculated. Provide students with samples. Have them run a blood count. The film, "The Inflammatory Reaction," should be useful.
Prepare a stained slide.	Demonstrate use of Wright's stain, buffer, and timers. Emphasize the invalidating affects of an improper slide on test results and, ultimately, on the patient.
Classify the white blood cells on a stained slide. Describe the morphology of RBC for a differentiated count.	Project microscope view of WBC and RBC. Demonstrate how WBC are classified, and indicate the characteristics of RBC. Explain the purpose of a differential count. Provide various slides. Have students classify WBC and describe the morphology of RBC.

	The student should be able to:	
	Set up a sedimentation rate.	Explain what data obtained from an erythrocyte sedimentation rate signifies. Demonstrate the process.
	Read and record an erythrocyte sedimentation rate.	Have students practice pipetting water and setting up a sedimentation rate. Explain the difference in viscosity and its affects. When the technique is mastered have them set up and record a sedimentation rate for provided blood.
– Blood Chemistry	Perform plastic strip test for glucose and blood urea nitrogen levels.	State the normal level of glucose and B.U.N. for men and for women.
	Determine glucose and B.U.N. levels.	Obtain capillary blood. Demonstrate the plastic strip test. Emphasize the importance of accuracy in timing the tests. Have students test provided samples and chart the results.
– Bacteriology		
. Slides	Prepare a slide, examine it for identification of organisms, and record the findings.	Demonstrate the use of Gram's stain, staining rack, and tray. Provide slides containing smears. Have students fix the smear, stain and time the slides, use immersion oil, examine the slides under the microscope, and record the findings.

. Culture Media	*The student should be able to:* Select and prepare the media appropriate for obtaining a specified culture.	Describe the different types of media and cultures. Have students prepare a chart listing the various types of cultures and the media used to obtain each. Provide a list of cultures. Have students prepare appropriate media.
◦ Specialized Testing		
– Electrocardiography	Set up the electrocardiograph. Prepare the patient for testing. Perform an ECG. Cut and mount a completed ECG.	Instruction should include setting up the machine, draping the patient, attaching the electrodes, and running the test. Show examples of normal and abnormal readings. Emphasize the importance of keeping the patient relaxed. Show the results of patient moving during the test. The film, "Disorders of the Heart Beat," should be useful.
– Audiometry	Assist the licensed person in performing a hearing test. Chart the results.	Demonstrate the use of the audiometer, and the technique of reading an audiogram.
– Visual Acuity	Perform a visual acuity test. Record the results.	Instruction should include positioning the patient at the required distance, use of eye shields, and technique of testing with various charts, such as Snellen and animal.

— Radiology

. Preparation	*The student should be able to:*	
	State the nature and purpose of commonly prescribed X-ray series.	Instruction should include such series as barium enema, gall bladder, G.I., and IVP.
	State which series are to be N.P.O. (nothing by mouth), and which require dyes.	
	Instruct patients in at-home preparation for any common X-ray series.	Emphasize the importance of correct preparation.
	Prepare the patient for X-ray.	Role-play a medical assistant instructing a patient in undressing, removing jewelry, and donning the gown.
		Show an X-ray of patient who failed to remove a pendant or necklace.
	Assist the patient into position on the X-ray table.	Have students assume roles of medical assistant and patient being helped onto X-ray table. Emphasize need to guard against the patient falling.
	Maintain an X-ray name imprint card file in both the alphabetical and numerical systems.	Explain the various X-ray marking systems, such as cards, new tape, and lead letters.
		Have students set up a card system and practice pulling, dating, and preparing cards for X-ray, and refiling.
	Prepare and file X-ray envelopes using both the alphabetical and numerical systems.	Have students set up an X-ray envelope file system and practice preparing and filing X-ray envelopes.

. Exposure Developing	*The student should be able to:* Develop X-ray exposures.	Demonstrate the procedures to be followed in developing X-rays. Emphasize the importance of adhering to proper procedure in order to prevent streaking or finger-spotting the exposure.
	Reload casette.	Demonstrate the procedure for reloading the casette. Have students practice developing and reloading.
. Safety	List the common hazards in the X-ray room, and describe the precautions to be taken for each.	Discuss the dangers inherent in radiologic procedures. Describe the safety precautions which must be taken. Have students prepare a chart of hazards and attendant precautions.
– Skin Tests	List the various types of skin tests. Choose or list the equipment necessary for any specified skin test. Describe the expected reactions to any specified skin test.	Instruction should include the intradermal allergy, Mantoux, patch, P.P.D., and tine tests. Demonstrate intradermal injection in a training arm. Have students prepare a chart of skin tests, necessary equipment, and expected reactions.
◦ Office Therapy		
– Equipment	List the items of therapy equipment commonly found in the physician's office, describing	The medical assistant's role in office therapy is – <u>under present law</u> – literally that

— Procedures	the purpose, operation, and safety precautions of each. Describe the duties of the medical assistant in aiding the licensed person in therapy procedures.	of *assisting* the physician, physician's associate, physical therapist, or other persons licensed to perform and supervise therapy procedures. Instruction in this area should be limited to that necessary to enable the graduated student to respond instantly and properly to the licensed person's directions.

RELATIONSHIP OF CLINICAL EXPERIENCE

Clinical experience is a vital part of the education of the medical assistant. The experience not only helps the student relate classroom instruction to actual situations, it also provides new knowledge, teaches new skills, and forms desired attitudes. Most important, the clinical experience helps the student to accept professional responsibilities.

To be effective, the clinical experience must be planned on the basis of desired student outcomes, and continually evaluated and revised for best use of available facilities, resources, and teaching talent of the school and clinic staffs. Ideally, the clinical experience should be based on the prevailing standards for entry into employment as a medical assistant. Actually, consideration must be made of the limitations of available resources, and of the needs of the individual student.

Regardless of the number of students involved, it is imperative that the clinical experience be governed by a written agreement between the educational and clinical institutions. The agreement should be cooperatively developed by representatives of both institutions. While the wording should be simple and clear to the average person, legal assistance or opinion should be secured before the agreement is signed.

The following list suggests those items which should be considered when an agreement is being developed. A sample agreement is also provided as a model for development of local agreements, which must be tailored to local conditions.

1. Purpose and Objectives of the Cooperative Affiliation.

2. Mutual Promises, Responsibilities and Substantive Provisions.

   - nondiscriminating clause
   - visits of educational staff
   - visits of clinic center staff
   - rules and holiday schedules
     - uniforms
     - hours of work
     - meetings
     - school calendar
   - equipment exchanges
   - schedules
     - number of students
     - rotations

- staff changes
- health
  - immunizations and physical examinations if needed
  - care of a student who becomes ill or is injured
- insurance requirements
  - volunteer coverage
- mutual use of facilities
- publication rights
- withdrawal and dismissal of student from assignment
- role of student
  - not to be used in lieu of staff
  - to be supervised at all times

3. Educational Institution's Rights, Responsibilities, and Obligations

- autonomy
- planning of educational program
- records and reports
- evaluation forms
- withdrawal of student from clinical area
- discipline
- coordination
- planning
- attendance
- assignment of faculty
- provision of coordinator of clinical education or other liaison person
- costs, if any
- insurance, if any...legal responsibility
- transportation

4. Clinical Center's Rights, Responsibilities, and Obligations

- autonomy
- provisions for supervision when a teacher is not available
- provision of learning experiences
- equipment and supplies
- availability and use of other facilities at the center
  - rest rooms, lockers, conference rooms
- evaluation of students and the program provisions
  - for feedback

- orientation
- rejection or dismissal of a student; requesting school to withdraw student

5. Mechanisms for Continued Cooperation, Regulation, Review, or Termination

   - time period covered
   - liaison
   - arbitration of disputes
   - renewal
   - revision
   - termination

6. Signatures and Dates
   Two persons from each agency should sign the completed agreement.

SAMPLE CLINICAL COOPERATION AGREEMENT

AGREEMENT BETWEEN

(NAME & ADDRESS OF EDUCATIONAL AGENCY)

AND

(NAME & ADDRESS OF CLINICAL AGENCY)

The purpose of this affiliation is to provide the Medical Assisting student a continuing learning experience through the application of knowledge and skills in actual situations.

Purposes:

1. To help the student develop as an individual, and to foster interest in his/her own intellectual, and cultural growth.

2. To help the student assume responsibility for growth in his/her field.

The (Educational Agency) agrees to:

1. Educate students who give promise of having adequate mental and physical ability and of being purposeful, responsible, and emotionally stable, as participants in the Medical Assisting Program.

2. Provide adequate basic instruction for the student in Medical Assisting principles and allied subjects.

3. Send to the clinical area only those students who are in good health and have had a tuberculin test (tine).

4. Provide a program coordinator, instructor, and such additional staff members as necessary for the purpose of evaluation of program, and of students while engaged in clinical practice in accordance with standards set forth in the course of study.

5. Send a mutually agreed upon number of students for clinical experience as established by participating agencies.

6. Confer with the clinical personnel periodically to evaluate the progress of the student as well as the total program.

The (Clinical Agency) agrees to:

1. Accept Medical Assisting students who have satisfactorily completed basic instruction.

2. Provide adequate practice and supervision for students while assigned for clinical experience.

3. Accept a mutually agreed number of students, and provide practice for them as established by the participating agencies, according to standards set forth in the course of study.

4. Confer with (The Educational Agency) Advisory Committee on Health Programs in relation to the program necessary to accomplish the objectives of the school.

5. Cooperate with the Program Coordinator and instructors appointed by (The Educational Agency) to responsibility for school records of the evaluation of Medical Assisting students.

6. Provide only such first aid treatment as may be necessary. Further care will be the responsibility of the individual or the parent or guardian.

The (Clinical Agency) and/or (The Educational Agency) reserve the right to terminate the affiliation of any student who does not conform to the clinical agency standards for Medical Assisting students.

The (Educational Agency) reserves the right to terminate the affiliation of any student who does not conform to the school standards for Medical Assisting students.

The (Educational Agency) reserves the right to make the final decision concerning the withdrawal of the student from the Medical Assisting Program.

The (Clinical Agency) reserves the right to request that a student be withdrawn, if in their opinion the student is not conforming to the policies of the agency.

This agreement may be terminated by either party upon notifying the other in writing, 60 days in advance, that the agreement be terminated. Such termination will not, however, affect students then enrolled, such students continuing at the agency until completion of their clinical experience.

This agreement will be effective for (a period of time to be mutually agreed upon.)

_____
(Title of Educational Agency Official)

_____
(Title of Clinical Agency Official)

_____
(Educational Director)

_____
(Clinical Director)

_____
(Date of Signing)

PROCEDURE FOR OBTAINING CERTIFICATION

The American Association of Medical Assistants provides certification in two classifications: Administrative Medical Assistant, and Clinical Medical Assistant. Dual certification is also extended. The purposes of such certification are ——

To establish professional standards and goals for medical assistants.

To help physicians identify competent medical assistants.

The certifying Board of the AAMA conducts one-day examinations throughout the United States on the fourth Friday in June, each year. Applications must be received by the Board before February 1 to be considered for the examination of that calendar year. Applications are obtained from:

Chairman, The Certifying Board
American Association of Medical Assistants
1 East Wacker Drive; Suite 1510
Chicago, Illinois 60601

Eligibility requirements have been established.

An applicant holding a secondary school diploma, or equivalent, and three years work experience as a medical assistant will be admitted to examination for certification as *either* Administrative Medical Assistant *or* Clinical Medical Assistant; one additional year of experience is required for examination for dual certification.

An applicant who is enrolled in a one-year AMA/AAMA accredited program may apply for examination for the dual certification before the February 1st preceding graduation. Those who are accepted, and who pass the examination, will be granted certification on subsequently proving completion of one year of work experience as a medical assistant.

RESOURCE LIST

BOOKS

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Laird, D. A. & Laird, E. C. *The technique of handling people;* 2d rev. ed. New York. McGraw-Hill. 1954.

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Taber, Clarence W. *Cyclopedic medical dictionary;* 12th ed. Philadelphia. F. A. Davis Co. 1973.

Young C. G. & Barger, J. D. *Learning medical terminology step by step;* 2d ed. St. Louis. Mosby. 1971.

PAMPHLETS

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American Medical Association. *Judicial council opinions and reports.* Chicago. The Association. 1969.

_____. *Medicalegal forms with legal analysis.* Chicago. The Association. 1961.

_____. *The wonderful human machine.* Chicago. The Association. 1971.

_____. *Winning ways with patients.* Chicago. The Association. 1972.

Carnation Co. *Pregnancy in anatomical illustration.* Los Angeles. The Company. 1965.

Metropolitan Life Insurance Co. *Panic or plan?* New York The Company. 1966.

Parry S. *Improving your written communications.* Metromedia Analern Publishing Co. N.D.

U. S. Post Office. *Postal Information Series.* Washington, D. C. U. S. Postal Service. 1972-1973.

Wyeth Laboratories. *Sterilization procedures for the medical office.* Philadelphia. The Laboratories. 1966.

FILMS

Accent on accuracy. Ames Co. 16 mm. sound. Color.

A half million teenagers. New York State Department of Health. 16 mm. sound. 16 minutes. Color.

A manner of speaking. New York Telephone Company Film Library. 16 mm. sound. 20 minutes. Color.

Balance your diet for health and appearance. Coronet Films. 16 mm. sound. 11 minutes. Color.

Breast self-examination. American Cancer Society. 16 mm. sound. Color.

Cancer detection: proctosigmoidoscopy in office practice. C. B. Fleet Co., Inc. Modern Talking Picture Service, Inc. 16 mm. sound. Color.

Case in point. Wyeth Film Library. 16 mm. sound. 20 minutes. Color.

Circulation of the blood. American Heart Association. 16 mm. sound. 8½ minutes. Color.

Communicable and degenerative diseases. New York State Department of Health. Albany, New York. 16 mm. sound. 30 minutes.

Digestive system. Encyclopedia Britannica Films. 16 mm. sound. 17 minutes. Color.

Disorders of the heart beat. Wyeth Film Library. Sterling Films. 16 mm. sound. 20 mirutes. Color.

Embattled cell. American Cancer Society. 16 mm. sound. 21½ minutes. Color.

Emergency 77. Association Films, Inc. 16 mm. sound. 14 minutes. b & w.

Essentials of the neurological examination. American Medical Association Film Library. 16 mm. sound. 50 minutes. Color.

Facts about backs. New York Telephone Company Film Library. Sterling Films. 16 mm. sound. 14 minutes. Color.

First-aid. American Red Cross. 16 mm. sound. 30 minutes.

First-aid. Treatment of Fractures. Bailey. 16 mm. sound. 6 minutes. Color.

First contact. Wyeth Film Library. 16 mm. sound. 25 minutes. Color.

Fundamentals of the nervous system. Encyclopedia Britannica Films. 16 mm. sound. 17 minutes. Color.

Gateways to the mind. New York Telephone Company Film Library. Sterling Films. 16 mm. sound. 60 minutes. Color.

Hemo, the magnificent. New York Telephone Company Film Library. Sterling Films. 16 mm. sound. 60 minutes. Color.

High blood pressure. American Heart Association. 16 mm. sound. 7 minutes. Color.

Human gastric function. American Medical Association. 16 mm. sound. 18 minutes. Color.

Immunizations against infectious diseases. Lederle. 16 mm. sound. 30 minutes. Color.

Infectious diseases and natural body defenses. Coronet Films. 16 mm sound. 30 minutes.

Muscles and bones of the body. Coronet Films. 16 mm. sound. 11 minutes. Color.

Pulse of Life. American Heart Association. 16 mm. sound. 27 minutes. Color.

Sterilization procedures for the medical office. Wyeth Film Library. Sterling Films. 16 mm. sound. 29 minutes. Color.

Techniques of parenteral medication. Becton-Dickinson & Co. Sterling Films. 16 mm. sound. 20 minutes. Color.

Temperature, pulse and respiration. Sterling Films. 16 mm. sound. 14 minutes. b & w.

The first two weeks of life. Pampers Association. Sterling Films. Color.

The heart and how it works. American Heart Association. 16 mm. sound. 11 minutes. b & w.

The human body – digestive system. Coronet Films. 16 mm. sound. 14 minutes. Color.

The human body – excretory system. Coronet Films. 16 mm. sound. 14 minutes. Color.

The human body – muscular system. Coronet Films. 16 mm. sound. 14 minutes. Color.

The human body – nutrition and metabolism. Coronet Films. 16 mm. sound. 14 minutes. Color.

The human body – reproductive system. Coronet Films. 16 mm. sound. 13 minutes. Color.

The human body – respiratory system. Coronet Films. 16 mm. sound. 14 minutes. Color.

The human body – skeleton. Coronet Films. 16 mm. sound. 11 minutes. b & w.

The human body – the brain. Coronet Films. 16 mm. sound. 16 minutes. Color.

The inflammatory reaction. Lederle. 16 mm. sound. 26 minutes. Color.

The thread of life. New York Telephone Company Film Library. Sterling Films. 16 mm. sound. 59 minutes. Color.

The vacutainer system. Becton-Dickinson & Co., Assoc. Sterling Films. 16 mm. sound. Color.

Tissues of the human body. Churchill Films. 16 mm. sound 16 minutes. Color.

MISCELLANEOUS

Histacount Practice Kit. Histacount Corp. Melville, New York.

Medical Office Practice Kit. Peter L. Agnew & Phillip Atkinson. Southwestern Publishing Co., Cincinnati, Ohio.

Peg-A-Log Accounting System. The Calwell Co., Champaign, Illinois.

Teletrainer: with student and Teacher Guides. New York Telephone Co.

SOURCE DIRECTORY

Association Films, Inc.
600 Grand Avenue
Ridgefield, New Jersey 07657

Ames Company
Elkhart, Indiana 46514

American Cancer Society, Inc.
219 East 42d Street
New York, New York 10017

American Heart Association, Inc.
44 East 23d Street,
New York, New York 10010

American Medical Association
Motion Picture Film Library
535 North Dearborn Street
Chicago, Illinois 60610

American National Red Cross
National Headquarters
Washington, D. C. 20000

Bailey
BFA Educational Media
2211 Michigan Avenue
Santa Monica, California 90404

Becton-Dickinson & Company
Motion Picture Film Library
Rutherford, New Jersey 07070

Calwell Co.
201 Kenyon Road
Champaign, Illinois 61820

Carnation Co., Medical Department
5045 Wilshire Boulevard
Los Angeles, California 90036

C. B. Fleet Co., Inc.
P. O. Box 1100
Lynchburg, Virginia 24505

Churchill Films
6671 Sunset Boulevard
Los Angeles, California 90028

Coronet Instructional Films
Coronet Building
65 East South Water Street
Chicago, Illinois 60601

C. V. Mosby Co.
3207 Washington Boulevard
St. Louis, Missouri 63103

Encyclopedia Britannica Films, Inc.
Wilmette, Illinois 60091

F. A. Davis Co.
1915 Arch Street
Philadelphia, Pennsylvania 19103

Histacount Corp.
Melville, New York 11746

J. B. Lippincott Co.
East Washington Square
Philadelphia, Pennsylvania 19105

John Wiley & Sons, Inc.
605 third Avenue
New York, New York 10016

Johnson & Johnson
New Brunswick, New Jersey 08901

Lederle Laboratories Division
30 Rockefeller Plaza
New York, New York 10965

McGraw-Hill Book Co., Inc.
330 West 42d Street
New York, New York 10036

Medical Economics Co.
Oradell, New Jersey 07649

Metromedia Analern Publishing Co.
235 Park Avenue South
New York, New York 10033

Metropolitan Life Insurance Co.
1 Madison Avenue
New York, New York 10010

Modern Talking Picture Service, Inc.
C. B. Fleet Co.
Film Library, Main Floor
1212 Avenue of the Americas
New York, New York 10036

National Dairy Council
111 North Canal Street
Chicago, Illinois 60606

New York Department of Health
Film Library
84 Holland Avenue
Albany, New York 12208

Prentice-Hall, Inc.
Englewood Cliffs, New Jersey 07631

W. B. Saunders Co.
West Washington Square
Philadelphia, Pennsylvania 19105

Southwestern Publishing Co.
5101 Madison Road
Cincinnati, Ohio 45227

Springer Publishing Co., Inc.
200 Park Avenue South
New York, New York 10003

Sterling Films
43 West 61st Street
New York, New York 10023

W. B. Saunders Co.
Wyeth Film Library
P. O. Box 8299
Philadelphia, Pennsylvania 19101